

REMARKS

Claims 1-19 are pending with claims 9-19 added by this amendment. Support for these added claims can be found in the specification at page 3, line 34 - page 4, line 37; page 7, line 24 - page 8, line 4; Examples at Table 1, page 11; and the claims as originally filed.

Specification Objection

An Abstract has been attached on a separate sheet. As such, Applicants respectfully submit that this objection be withdrawn.

Provisional Rejection Under Obviousness-Type Double Patenting

Claims 1-8 stand provisionally rejected as allegedly unpatentable over claims 10-18 of copending Application No. 09/544,613. Because this is a provisional rejection, submission of a terminal disclaimer would be premature. Claims 10-18 of the copending application could be abandoned or amended to moot the rejection. It should be noted that a provisional rejection cannot be maintained as the sole ground of rejection against an application. Thus, since all other rejections are believed overcome, this provisional rejection must be withdrawn.

Claim Objection

Claim 8 stands objected for being a substantial duplicate of claim 3. However, Applicants respectfully submit that claim 3 depends from claim 1 and claim 8 depends from claim 2. Claim 1 defines the blend of the polymer (A) and the polyethylene (B) having a relative density between 0.930 and 0.950 and claim 2 defines the relative density of the polymer (A) + the polyethylene (B) between 0.930 and 0.940. Claim 2 recites a narrower relative density of the polymer (A) and the polyethylene (B) than claim 1. As such, claim 8 depending from claim 2 is not a substantial duplicate of claim 3. Consequently, Applicants respectfully submit that the objection be withdrawn.

Claim Rejections Under 35 U.S.C. 112, second paragraph

Claims 1-3 stand rejected as allegedly omitting essentially elements. With respect to the definitions of (A) and (B) in claims 1 and 2, Applicants have amended the claims to include, respectively, the term "polymer" before "(A)" and "polyethylene" before "(B)". In

addition, Applicants have defined "MFI" in claim 1. With respect to the definition of the layer (E), Applicants have amended claims 3 and 8 to clarify that layer (E) is selected from the group consisting of a layer of a nitrogen-containing or oxygen-containing polar resin, a layer of polyamide resin, a layer of an aliphatic polyketone, a layer of a saponified ethylene-vinyl acetate copolymer (EVOH), a layer of a polyester resin, and a metal layer. As such, Applicants respectfully submit that claims 3 and 8 are sufficiently definite so that one of skill in the art can ascertain the metes and bounds of the layer (E). It is not clear what was being objected to as missing since it should be clear. Additionally, Applicants respectfully submit that the scope of these claims has not been narrowed by these amendments because the amendments merely make explicit what was inherent.

With respect to the definition ASTM D 1238, Applicants respectfully submit that this test method for determining the melt flow rates of thermoplastics, published by the American Society For Testing and Materials of West Conshohocken, PA, is well known to one of skill in the art. See also column 3, lines 4-5 and column 4, lines 64-66 of U.S. Pat. No. 4,397,916 (Nagano). As such, one of skill in the art can readily ascertain the metes and bounds of the claimed invention.

In view of the above, Applicants respectfully submit that the rejections under 35 U.S.C. §112, second paragraph should be withdrawn.

Claim Rejections Under 35 U.S.C. §102

Claims 1-8 stand rejected as allegedly anticipated over U.S. Pat. No. 4,397,916 (Nagano). The Action asserts that Nagano discloses 5 to 30 parts of a polymer (A) comprising a blend of a polyethylene (A1) of relative density between 0.935 and 0.980 and of a polymer (A2) selected from the group consisting of elastomers, very low-density polyethylenes and ethylene copolymers. The Action cites column 1, lines 41 and 45, column 2, line 55, and column 3, line 14 as support. Also the Action alleges that Nagano discloses 95 to 70 parts of polyethylene (B) at column 4, line 65. Furthermore, the Action alleges that Nagano discloses an MFI measured according to ASTM D 1238 at 190°/21.6 kg of between 5 and 100 at column 2, line 68. Applicants respectfully traverse these rejections.

Nagano discloses a layer (A) of a graft-modified ethylene resin grafted with an unsaturated carboxylic acid consisting of:

- (i) 1 to 100% by weight of said graft-modified ethylene resin derived from an ethylene polymer which contains 0 to 15

mole% of at least one alpha-olefin having 3 to 30 carbon atoms as a comonomer and has an $\text{MI}_2/[\eta]^{8.77}$ ratio in absolute value of not less than 15 and a density of 0.88 to 0.98 g/cm³, and

(ii) 99 to 0% by weight of an unmodified ethylene polymer containing 0 to 50 mole% of at least one alpha-olefin having 3 to 30 carbon atoms as a comonomer and having an $\text{MI}_2/[\eta]^{8.77}$ ratio in absolute value of not less than 15 and a density of 0.86 to 0.96 g/cm³, and

(2) the layer (A) has

- (a) an ethylene content of not less than 80 mole%,
- (b) a content of the carboxylic acid or the derivative thereof of 0.01 to 10% by weight based on the weight of the layer (A),
- (c) a density of 0.88 to 0.98 g/cm³, and
- (d) an $\text{MI}_{10}/\text{MI}_2$ ratio of from 5 to 18.

Column 2, lines 49-68.

In addition, MI_{10} and MI_2 are defined as:

MI_{10} means the melt index at 190° C. under a load of 10 kg measured in accordance with ASTM D1238, and MI_2 denotes the melt index at 190° C. under a load of 2,160 g (2.16 kg) measured in accordance with ASTM D1238.

Column 3, lines 1-5.

However, to anticipate a claim, the reference must teach every element of the claim. Nagano fails to teach or suggest a polymer (A) comprising a blend of polyethylene (A₁) and of a polymer (A₂) selected from the group consisting of elastomers, very low density polyethylenes and ethylene copolymers, and the (A₁)+(A₂) blend being cogenerated with an unsaturated carboxylic acid. Rather, Nagano discloses only one grafted ethylene resin (i) derived from an ethylene polymer which contains 0 to 15 mole % of at least one alpha-olefin having 3 to 30 carbon atoms as a comonomer (see column 2, lines 50-53 and the Examples). There is no blend and no co-grafting of such a blend in Nagano. Thus, no anticipation.

As an aside, Applicants traverse the assertion that Nagano discloses at column 3, line 14, 5 to 30 parts of a polymer. Rather, Nagano discloses that the graft-modified ethylene resin (i) is obtained by modifying an ethylene polymer containing 0 to 15 mole % of an

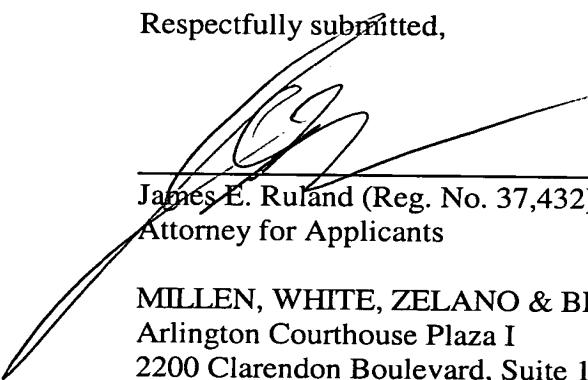
alpha-olefin. In addition, Nagano fails to disclose at column 4, line 65, 95 to 70 parts of polyethylene (B). Rather, Nagano discloses that the polymer (ii) is a rubbery resin with an ethylene content of 60 to 90 moles % (column 4, lines 51-66).

Moreover, Nagano fails to disclose the blend of (A) and (B) having an MFI measured according to ASTM D1238 at 190°C/21.6 kg of between 5 to 100. Rather Nagano discloses at column 2, line 68, an MFI_{10}/MFI_2 ratio of from 5 to 18. Upon information and belief, this ratio, as disclosed at column 3, lines 1-5, is very different and cannot give correlation with the MFI value measured under a load of 21.6 kg, as defined.

For each of the above reasons, it is urged that Nagano fails to anticipate the instant claims and thus the 35 USC §102 rejection should be withdrawn.

In view of the above remarks, favorable reconsideration is courteously requested. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned, "**VERSION WITH MARKINGS TO SHOW CHANGES MADE**". If there are any remaining issues which can be expedited by a telephone conference, the Examiner is courteously invited to telephone Counsel at the number indicated below.

Respectfully submitted,


James E. Ruland (Reg. No. 37,432)
Attorney for Applicants

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
Arlington Courthouse Plaza I
2200 Clarendon Boulevard, Suite 1400
Arlington, Virginia 22201
Direct Dial: 703-812-5338
Facsimile: 703-243-6410

Filed: February 28, 2002

JER:\amendment and response.doc

Version With Markings To Show Changes Made

IN THE CLAIMS

Claims 1, 2, 3 and 8 have been amended as follows:

1. (Twice Amended) A coextrusion binder comprising:

- 5 to 30 parts of a polymer (A) comprising a blend of a polyethylene (A1) of relative density between 0.935 and 0.980 and of a polymer (A2) selected from the group consisting of elastomers, very low-density polyethylenes and ethylene copolymers, the (A1) + (A2) blend being cografted with an unsaturated carboxylic acid; and
 - 95 to 70 parts of a polyethylene (B) of relative density between 0.930 and 0.950;

the blend of the polymer (A) and the polyethylene (B) having:

- a relative density between 0.930 and 0.950,
- a content of grafted unsaturated carboxylic acid of between 30 and 10,000 ppm, and
- ~~an MFI (melt flow index)~~ measured according to ASTM D 1238 at 190°C/21.6 kg of between 5 and 100.

2. (Twice Amended) A binder according to claim 1, in which the relative density of the polymer (A) + the polyethylene (B) is between 0.930 and 0.940.

3. (Twice Amended) A multilayer structure comprising a layer comprising the binder of Claim 1, directly attached to said binder, a layer (E) selected from the group consisting of a layer of a nitrogen-containing or oxygen-containing polar resin, a layer of polyamide resin, a layer of an aliphatic polyketone, a layer of a saponified ethylene-vinyl acetate copolymer (EVOH), a layer of a polyester resin, and a metal layer.

8. (Amended) A multilayer structure comprising a layer comprising the binder of claim 2, directly attached to said binder, a layer (E) selected from the group consisting of a layer of a nitrogen-containing or oxygen-containing polar resin, a layer of polyamide resin, a layer of an aliphatic polyketone, a layer of a saponified ethylene-vinyl acetate copolymer (EVOH), a layer of a polyester resin, and a metal layer.

ABSTRACT

Generally, the present invention relates to a coextrusion binder including 5 to 30 parts of a polymer (A) and 95 to 70 parts of a polyethylene (B). Polymer (A) can include a blend of a polyethylene (A1) of relative density between 0.935 and 0.980 and of a polymer (A2) selected from the group consisting of elastomers, very low-density polyethylenes and ethylene copolymers. The (A1) + (A2) blend is generally cogenerated with an unsaturated carboxylic acid.

The polyethylene (B) has a relative density between 0.930 and 0.950.